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I. Introduction

A. The CID Grammatical Analysis of Elicited Language- Simple Sentence Level is a test of expressive language. Ninety-four specific target sentences are elicited through game-like activities. These activities have been set up so that a natural situation is provided which requires the target sentence. The child is given the opportunity to construct the appropriate sentence and to then imitate the examiner's model.

These target sentences contain a variety of structures which are then distributed into sixteen specific grammatical categories for scoring.

One method of evaluating a young child's language has been to gather a spontaneous language sample of fifty utterances of more and then analyze those utterances as to sentence length and grammatical complexity. (Lee 1966) This type of evaluation requires that the examiner develop a meaningful rapport with the child in order to elicit a representative sample of his language. (Kleffner 1973) It also requires a great deal of skill on the examiner's part in providing a situation which will give the child the opportunity to use those language structures he knows and to use a variety of them.

The GAEL, which uses various games and activities, provides a good tool for developing rapport quickly with children. Few of them can resist the temptation of opening a box to see what lies inside or setting up a tea party with mommy and daddy and toy food objects.

The activities in the GAEL have also been designed to elicit specific target sentences which contain a sampling of a variety of simple grammatical structures. Several opportunities are provided within the activity for the child to construct the target sentence.

In this way a more objective means is used to elicit a language sample which is representative of the child's ability.

Tests using sentence imitation have also been used in evaluating a child's language. In these tests the child is asked to imitate verbatim what the examiner has said. The research is continuing on the question of how much imitation actually reflects competence of simply measures rote memory ability. As Lloyd points out, "Imitation does reflect linguistic knowledge in some instances, but not always, and not in any simple way. It is impossible to interpret items that are imitated correctly because these may reflect either syntactic knowledge or rote memory. Even though the sentence may be too long, the child may chunk it in various ways and treat the chunks as rote items." (Lloyd 1976)

In the GAEL the examiner models the specific structure for the child using different vocabulary items. The child is given one practice item snd is then expected to construct the target sentence himself in response to the activity. After each attempt by the child the examiner models the correct sentence and the child then imitates this. The opportunity to imitate the sentence is provided for two reasons: 1. diagnostic- to see the gaps between the child's performance on both the prompted and imitated items. 2. learning- to determine whether or not learning does occur from the first to the last item in the activity.

B. In describing the language delayed child it is important to note that this term is not frequently found in the literature. Rather, the term used is "language disordered" which encompasses the category of children described as language delayed. The definitions devised by researchers can be applied to language delayed children as well.

Kleffner's general description of a language disorder is "a deficit in linguistic competence relative to existing levels of nonverbal social and intellectual development." He defines linguistic competence as "one's total knowledge of language, the linguistic knowledge which allows one to perform as he does with language." Linguistic performance refers to the "combined receptive and expressive use of language." (Kleffner 1973)

Tina Bangs specifies those areas of language which are disordered. She categorizes them into: a) disorders of semantics (vocabulary) and b) disorders of syntax and morphology. The first implies reduced vocabulary comprehension and usage and the second refers to comprehension and usage disorders in connected discourse. (Bangs 1968)

Ms. Bangs also writes, "disorders of language are concerned with a child's inability to comprehend the meaning of semantics and the syntactic and morphological rules in his oral output." (Bangs 1968)

Lloyd adds a third category to those previously discussed. In a discussion of the areas of involvement in a child diagnosed as having a language disorder he cites the "functional or interpersonal use of language" as another dimension. The ability to make one's needs understood or to understand another's is greatly affected by a language disorder and is an important aspect to be considered. (Lloyd 1976)

In summary, the language delayed child exhibits receptive and expressive language levels which fall below normal when compared with children whose language is developing normally.

C. The purpose of this study was 1) to establish that the GAEL identifies children with language disorders. 2) to examine the relative difficulty of each of the grammatical categories sampled on the GAEL in relation to the standardization sample.

II. Method

A. Fourteen girls and five boys between the ages of three years and five years six months were chosen as subjects. All nineteen children were diagnosed as being language delayed and were selected from special education settings.

Table 1 lists the scores obtained by nine of the children on the Peabody Picture Vocabulary Test and the Receptive Expressive Emergent Language Scale. Ten children had not been tested with iether of these procedures.

B. The Simple level of the GAEL was administered to each subject individually in an hour-long session by a trained examiner. The entire session was tape-recorded; a transcription was made of the child's utterances; and these utterances were then scored according to the different grammatical categories. the types of scores obtained for each subject in each grammatical category were: number correct, per cent correct, percentile rank and standard score. These same scores were computed for each subjects' Total score. The normative data gathered on two-hundred children with normal hearing and language was used in computing all scores.

III. Results

A. The total percentile ranks and standard scores are presented in Table 1 for each of the nineteen children. Each subject's Total standard score fell at or below 40 which is one standard deviation below the mean obtained on a sample of children with normal hearing and language. All nineteen subjects obtained percentile ranks which fell below 20.

B. The mean standard scores for the nineteen children in each of the sixteen grammatical categories are presented in Table 2 for prompted and

imitated productions. In order to compare these scores with those of the standardization samples, the number of correct prompted productions in each grammatical category was divided by the total possible to obtain a per cent correct score across all subjects. These results are plotted in Figure 1. The grammatical categories are ordered from left to right in terms of their relative difficulty for normal 2½ to 5 year olds. (Square data points) The circles represent performance of the two-hundred hearing-impaired 5 to 9 year olds in the standardization sample. The triangles represent the performance of the nineteen language impaired children in this study. The performance of these nineteen children does not parallel that of the normal sample. Their pattern of scores more closely resembles that of the hearing-impaired sample.

IV. Discussion

While some subjects may have scored in the normal range in one or more grammatical categories, every subject's Total standard score fell below normal. As a group these subjects did not score in the normal range in any grammatical category on either the prompted of the imitated tasks.

The percentile scores computed all fall below the 20th percentile rank. Therefore this is the recommended percentile cut-off for the normal range. These results would indicate that the GAEL does indeed identify those children with language disorders.

As is shown by Figure 1 the language delayed group exhibits a profile which follows more closely that of the hearing-impaired sample. This suggests that their language is not simply delayed but rather, deviates from the normal developmental progression. The order the grammatical ctaegories

follow also provide a basis for the decision a clinician has to make as to where to begin therapy with this type of child. (Table 3). That decision would also be based on the child's individual profile. Based on the results from these nineteen children, a language impaired group is likely to experience the most difficulty in their use of verb inflections, articles, copulas, and wh questions.

Table 1

Subj. No.	C.A.	Peabody Pict. Vocab. Vocab. Quotient	Peabody Pict. Vocab. %ile Rank	Peabody Pict. Vocab. Vocab. Age	REEL Rec. Lang. Age	REEL Exp. Lang. Age	GAEL Prompted %ile	GAEL Prompted T	GAEL Imitated %ile	GAEL Imitated T
1.	3-1				20 mo.	20 mo.	0	15	0	0
2.	3-2						0	20	0	7.5
3.	3-0	104	57	3-2	36 mo.	36 mo.	3.5	25	0	15
4.	3-6	107	66	3-5	27 mo.	18 mo.	2.5	5	2.5	12.5
5.	3-11						2.5	25	0	17.5
6.	3-11						15	40	15	40
7.	3-11				16 mo.	14 mo.	0	5	0	5
8.	3-11	84	15	2-5	24 mo.	14 mo.	0	0	0	7.5
9.	3-11						0	5	0	0
10.	3-9	79	7	2-4	33 mo.	33 mo.	2.5	22.5	7.5	27.5
11.	4-4						10	35	7.5	37.5
12.	4-1						0	0	0	0
13.	4-0						5	25	10	40
14.	4-1						5	25	7.5	40
15.	4-1	109	67	3-11			7.5	30	5	32.5
16.	4-6	102	53	4-8			0	0	0	0
17.	4-8				11 mo.	10 mo.	0	0	0	0
18.	4-9	38	below 1	2-4			0	0	0	0
19.	5-7	77	7	2-10			2	10	4	25

Table 2

Mean Standard Scores For Each Grammatical Category.

Category	Prompted	Imitated
Total score	15.1	17.9
Articles	13.2	17
Adjectives	31.8	28.9
Quantifiers	37.8	23.6
Possessives	30.5	29.9
Demonstratives	32	30.3
Conjunctions	32.1	28.6
Pronouns	20.8	21.3
Subject nouns	19.9	21.2
Object nouns	18.7	21.7
WH questions	29.1	25.5
Verbs	19.8	18.6
Verb inflections	20	16.2
Copulas	23.3	22.4
Inflections	25	22.4
Prepositions	21.7	20.1
Negatives	32.2	26.3

Table 3

Order of Grammatical Categories According to Relative Difficulty

	Normal hearing and language	Hearing Impaired	Language Impaired
1.	Object noun	Subject noun	Object noun
2.	Verb	Object noun	Verb
3.	Subject noun	Verb	Pronoun
4.	Article	Possessive	Subject noun
5.	Preposition	WH question	Adjective
6.	Demonstrative	Adjective	Preposition
7.	Pronoun	Quantifier	Negative
8.	Possessive	Conjunction	Quantifier
9.	Negative	Negative	Possessive
10.	Copula	Pronoun	Demonstrative
11.	Adjective	Article	Article
12.	WH question	Demonstrative	WH question
13.	Copula Inflection	Preposition	Conjunction
14.	Verb Inflection	Copula	Copula
15.	Conjunction	Copula Inflection	Copula Inflection
16.	Quantifier	Verb Inflection	Verb Inflection

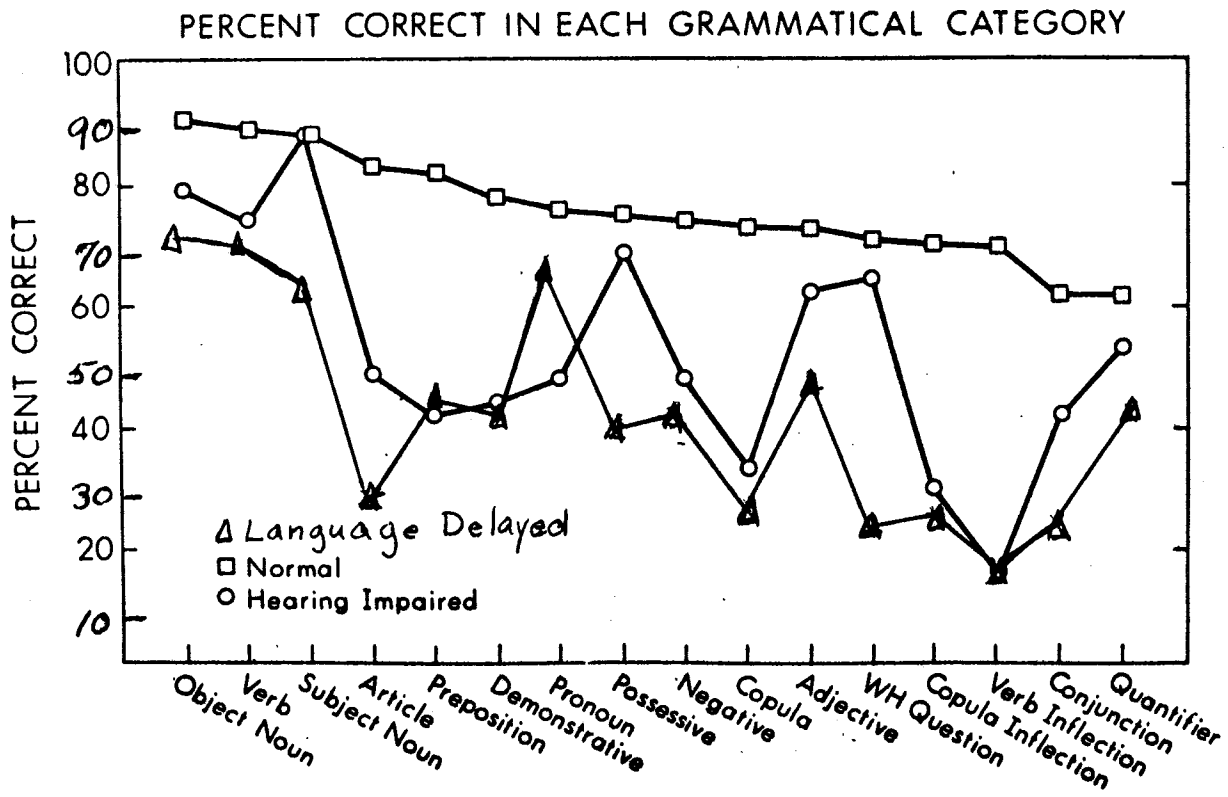

Fig. 1. Percent correct prompted scores averaged across all age categories for the normal[A] and hearing impaired samples.

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